REMARKS/ARGUMENTS

The Examiner is thanked for the review of the application.

Claims 1-4, and 6-11 remain in this application. Claim 1 has been amended. No new claims have been added. No new matter has been added.

In the Office Action dated February 28, 2007, the Examiner rejected Claims 1 and 3, under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. Regarding this rejection the Examiner has stated that "in the instant case, the following limitation is not supported by the specification 'further wherein each said demand group is defined by a user such that each said demand group is unique to said user'. The passage cited by the applicant (specification, page 60, lines 5-14) discloses developing a single regression model across stores and/or products in order to maximize the stability of the estimated model parameters that result from some stores and/or products having rich histories involving many price changes and a variety of promotion patterns, and some stores having sparse histories, with very few price changes and little promotional activity. This passage has nothing to do with the user defining a demand group such that each demand group is unique to the user. The examiner therefore will not consider the amendment that includes 'further wherein each said demand group is defined by a user such that each said demand group is unique to said user.'"

Applicants respectfully draw the Examiners attention to select passages of the specification which states that "[a] **category is defined as a set of substitutable or complementary products**, for example, 'Italian Foods'. **Such categorization can be proscribed by the client** or defined by generally accepted product categories." (Emphasis Added). Support may be found in the specification as filed on page 14, lines 18-20. Furthermore the specification states that "[the] supplemental file can be input into a spreadsheet program (e.g., Excel®) which can use the product information to define 'demand groups' (i.e., groups of highly substitutable products)." Support may be found in the specification as filed on page 16, lines 18-21. Additionally, the specification states that "a demand group (a group of highly substitutable products) is **chosen** . . ." (Emphasis Added). Support may be found in the specification as filed on page 18, lines 2 and 3.

Applicants respectfully submit that there is evidence in the specification to support the claim that "each said demand group is defined by a user such that, each said demand group is unique to said user" of Claims 1 and 3. Categorizations may be client defined by utilizing a spreadsheet to choose the demand grouping. Such human decisions regarding demand group selection are unpredictable and produce varied results. Thus, each choosing by the user client will necessarily be unique to the said user. As such, Applicants respectfully traverse the rejection.

In the same Office Action the Examiner has also rejected Claims 1 and 6 under 35 U.S.C. 103(a) as being unpatentable over Ouimet et al. (US 6,078,893), and further in view of Garg (US 6,044,357).

Regarding Claim 1, the Examiner has stated that "Ouimet et al. discloses: . . .Creating, using the computer system, a demand group sales model as a function of price wherein said demand group sales model models sales for each demand group, (col. 6, lines 5-11, [shows a one-dimensional demand model which scales the amount of sales, in this case, the variables are simply the prices {p}, and the demand parameters qi scales the amount of sales and gi, which describes the sensitivity of the item to price]), further wherein said demand group sales model provides a single model for modeling sales of all the products in each said demand group, (Col. 6, lines 12-15, shows more complicated models where a demand model which the is a nonlinear cross-correlation between the variables of different items, which represent products)." (Emphasis added).

Applicants respectfully submit that Ouimet '893 does not teach or suggest "[c]reating, using the computer system, a demand group sales model as a function of price wherein said demand group sales model **models sales for each <u>demand group</u>**" as claimed in Claims 1 and 3. (Emphasis added).

Contrary, Ouimet discloses "a system of coupled equations that **describe the demand for each <u>item</u>** . . ." (Emphasis Added). (See Col. 5, lines 60-63). Ouimet discloses the possible use of a "demand model in which there is nonlinear cross-correlation between the variables of different items;" however, here demand models are still generated for *each item*. (See Col. 6, lines 12-16). There appears to be no suggestion in Ouimet of determining a demand model for the entire 'group'.

The present invention as claimed in Claim 1 generates **a demand model for a demand group**. Ouimet does not appear to teach or suggest demand modeling for demand groups. Thus Quimet determines demand for each product individually, which requires significant processing resources. Contrary, the present invention as claimed in Claim 1 generates demand for a demand group, which requires fewer processing resources, and may provide valuable information about demand groupings that Ouimet is unable to provide. As such, Applicants respectfully traverse the rejection.

Moreover, in the same Office Action, regarding Claims 1 and 3, the Examiner states that "Creating, using the computer system, said product sales model by combining said demand group sales model and said internal market share model, wherein said product sales model models sales for individual products, further wherein said product sales model combines said demand group sales model and said internal market share model to produce said product sales model for individual products, (Col. 6, lines 63-64, where the user **selects a figure-of-merit function to be used to <u>tune the demand model to the <u>sales history</u>**, thereby creating a resulting demand model that conforms to the portions of the sales history data that shows a strong trend, and conform to the external market information when the corresponding portions of the sales history data show noise as shown in the abstract, lines 13-17, w/Col. 6, lines 12-15, shows a demand model which is a nonlinear, cross-correlation between the variables of different items, which represent individual products)." (Emphasis added).

Applicants respectfully submit that Ouimet '893 does not teach or suggest "[c]reating, using the computer system, **said product sales model by combining said demand group sales model and said internal market share model**, wherein said product sales model models sales for individual products, further wherein said product sales model combines said demand group sales model and said internal market share model to produce said product sales model for individual products" in the manner of Claims 1 and 3. (Emphasis added).

Ouimet appears to "**tune** the demand model **to sales history**" using a "figure-of-merit function." (Emphasis added). (See Col. 6 lines 63-65). Figure-of-merit functions are well known in the art as used to characterize the performance of a model relative to actual data. Thus the cited

reference appears to be entirely concerned with tuning of the demand model of Ouimet to better fit "sales history." (See Col. 6, line 64).

Contrary, the present invention discloses in Claims 1 and 3 "[c]reating . . . product sales model by combining said demand group sales model and said internal market share model." In the present invention the share model and the demand model are utilized to compute the product demand model. This **combination of models to generate a unique demand model** is distinct from a simple **tuning process** which simply **adjusts** the existing model **to better fit a data set**. As such, Applicants respectfully traverse the rejection.

Moreover, in the same Office Action, regarding Claims 1 and 3 Examiner states that "Garg discloses: wherein each demand group is a group of highly substitutable products, (Col. 13, line 65, shows inventory maintenance is implemented for products which means that these **products are replaceable through inventory stock**, w/Col. 14, lines 55-58 and col. 15, lines 17-18 and lines 24-26, show the selection of a first marketing mix, a selection of another marketing mix, and then the identification of which marketing mix generates the largest profit/loss, in this case, one marketing mix for products can be substituted for another marketing mix for the highest profit or loss outcome). Garg discloses this limitation in an analogous art for the purpose of showing that products within marketing mixes are interchangeable. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention for each demand group to be a group of highly substitutable products with the motivation of having the ability to replace the products when needed." (Emphasis added).

Applicants respectfully submit that Garg '357 does not teach or suggest "wherein each **demand group is a group of highly substitutable products**" as claimed in Claims 1 and 3. (Emphasis added).

Garg discloses "marketing mix variables, each of said variables representing marketing strategies for each of a plurality of brands of goods" (See Col. 14, lines 45-47). Additionally, Garg discloses "then selecting another sub-plurality of marketing mix variables, representing another marketing strategy, and calculates another estimated total profit/loss value." (See Col. 3, lines 39-41). It appears that Garg discloses an **iterative process** of selecting groupings of **brands** and

determining profits. At the end of the iterative process, the ***grouping of brands* with the highest profits is identified**. Garg discloses **grouping of brands**, not individual products.

Moreover, these groupings, as disclosed in Garg, are only limited by "feasible marketing strategies." (see Col. 3, lines 12-13). Thus, the selection of variables by Garg does not teach or suggest selecting groups of "**substitutable** products." (Emphasis added). As such, Applicants respectfully traverse the rejection.

Hence, even if one were to combine Ouimet with Garg, this combination does not teach or suggest "[c]reating . . . a plurality demand groups, wherein each demand group is a group of highly substitutable products . . . wherein each said demand group is defined by a user such that, each said demand group is unique to said user" and "[c]reating . . . a demand group sales model as a function of price wherein said demand group sales model models sales for each demand group . . ." and "[c]reating . . . product sales model by combining said demand group sales model and said internal market share model . . ." in the manner claimed in Claims 1 and 3.

Regarding Claim 6, the Examiner has stated that "Ouimet et al. discloses: Defining an equivalizing factor for the products of each demand group, (Col. 4, line 66-Col. 5, line 6)."

Applicants respectfully submit that Ouimet '893 does not teach or suggest "defining an equivalizing factor for the products of each demand group" in the manner of Claim 6.

The cited reference by the Examiner addresses Ouimet's disclosure that "the user selects a figure-of-merit function, which is a function that attains a minimum value when the parameters of a model are adjusted to match as closely as possible to known data." (See Col. 4, line 66-Col. 5, line 6). A figure-of-merit function is unsuitable to be used to equivalent volumes, or sizes, of products to one another. The cited art appears to have nothing to do with equivalizing factor or demand groups as disclosed in the present invention. Instead the cited art appears to only be concerned with tuning demand models to "sales history." (See Col. 5, line 5).

The Examiner has also rejected Claims 3-4 and 9 under 35 U.S.C. 103(a) as being unpatentable over Chavez et al. (US 6,684,193), and further in view of Ouimet et al., (US 6,078,893).

Regarding Claim 3, the Examiner has stated that "Chavez et al. discloses: . . . A coefficient estimator coupled to the imputed variable generator, and wherein imputed variables generated by the variable generator are used by the coefficient estimator to create a demand group sales model as a function of price, wherein said demand group sales model provides a single model for modeling sales of all of the products in each said demand group, an internal market share model, and a combined product sales model, wherein said product sales model models sales for individual products, further wherein said product sales model combines said demand group sales model and said internal market share model to produce said product sales model for individual products, [col. 15, lines 6-14, [shows an example of how the revenue coefficient is incorporated into modeling the value function in a manner to account for interactive effects between the refinements and the resources that comprise that particular model], w/ (Col. 6, lines 12-15, shows more complicated models where a demand model which the is a nonlinear, **cross-correlation between the variables of different items**, which represent individual products)." (Emphasis Added).

Applicants respectfully submit that Chavez et al. does not teach or suggest "**create a demand group sales model as a function of price**, wherein said demand group sales model provides a single model for **modeling sales of all of the products in each said demand group**" as stated in Claim 3. (Emphasis Added).

Rather, Chavez et al. discloses "nonlinear, cross-correlation between the variables of different items." (See Col. 6, lines 12-15). Thus, Chavez et al., while taking into account product demand elasticity, does not disclose generating a demand model for a **demand group**. Chavez et al. does not even appear to disclose product grouping of any sort, let alone by highly substitutable products as a demand group. As such, Applicants respectfully traverse the rejection.

The Examiner has also rejected Claims 2, 7-11 under 35 U.S.C. 103(a) as being unpatentable over Ouimet et al. (US 6,078,893), as applied to claim 1 above, and further in view of Garg (US 6,044,357), and further in view of Chavez et al. (US 6,684,193).

Regarding Claim 10, the Examiner has stated that "Ouimet et al. discloses: defining an equivalent price for each said product using said equivalizing factor; defining equivalent units sold for each said product using said equivalizing factor; defining an equivalent base price for each said

product using said equivalizing factor; defining equivalent base units sold for each said product using said equivalizing factor, (col. 5, lines 1-12, **shows that the figure of merit function** entered by the user, which depends upon a selected demand model is equivalent to a **standard function** (x squared), and gives an example of the sales history for a particular item as it relates to the selected model, therefore any function entered by the user will have an equivalent x squared function associated with it, w/col. 6, lines 5-11, shows that price is a constant equal to the average price of the item); creating a demand group equivalent sales model based on said equivalent price and said equivalent units sold, see above paragraph, col. 5, lines 1-12, demand model); creating, using the computer system, an equivalent product sales model by combining said demand group equivalent sales model and said equivalent internal market share model, wherein said equivalent product sales model models equivalent sales for individual products, (Col. 6, lines 63-64, where the user selects a **figure-of-merit function to be used to tune the demand model to the <u>sales history</u>**, thereby creating a resulting demand model that conforms to the portions of the sales history data that shows a strong trend, and conform to the external market information when the corresponding portions of the sales history data show noise as shown in the abstract, lines 13-17, w/Col. 6, lines 12-15, shows a demand model which the is a nonlinear, cross-correlation between the variables of different items, which represent individual products); . . . Garg discloses: creating, using the computer system, an internal a market share model wherein said internal market share model determines the fraction of the internal sales of each demand group comprised by each product, (col. 5, lines 38-41, [market share model to characterize the demand distribution for each brand, in this case, the group is represented by the brand, and the demand distribution represents a different demand resulting from sales for each product. This demand distribution will therefore vary for each brand, and therefore represents fraction of the sales] . . . Chavez et al. discloses: indexing said demand group equivalent sales model by divided said demand group equivalent sales by baseline demand group equivalent sales, (Col. 10, lines 7-25, shows that the **baseline demand is considered when dealing with modeled parameters**). Chavez et al. discloses this limitation in analogous art for the purpose of showing that baseline demand serves as a part of modeling demand. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to index the demand group

equivalent sales model by divided said demand group equivalent sales by baseline demand group equivalent sales with the motivation of showing a demand model based on baseline demand." (Emphasis Added).

Applicants respectfully submit that Ouimet et al., Garg nor Chavez et al. teach or suggest even the existence of an "**equivalizing factor**" in the manner of Claim 10. (Emphasis Added). As previously stated, the cited reference by the Examiner addresses Ouimet's disclosure that "the user selects a figure-of-merit function, which is a function that attains a minimum value when the parameters of a model are adjusted to match as closely as possible to known data." (See Col. 4, line 66-Col. 5, line 6). A figure-of-merit function is unsuitable to be used to equivalent volumes, or sizes, of products to one another. **The cited art appears to have nothing to do with *equivalizing factor between products of a demand group* as disclosed in the present invention**. Instead the cited art appears to only be concerned with tuning demand model to "sales history." (See Ouimet Col. 5, line 5). **Without the disclosure of an "equivalizing factor" the rejection is moot, since the "equivalizing factor" is utilized in every step on Claim 10**. As such, Applicants respectfully traverse the rejection.

Base Claim 1 has been amended to recite in relevant part: "[c]reating, using the computer system, a market share model wherein said market share model determines the fraction of the sales of each demand group comprised by each product." Support may be found at page 59, lines 5-13 of the specification as filed.

In sum, base Claim 1 has been amended, and base Claims 1 and 3 are now believed to be allowable. Dependent claims 2, 4, 6-11 which depend therefrom are also believed to be allowable as being dependent from their respective patentable parent claims 1 and 3 for at least the same reasons. Hence, Examiner's rejection of dependent Claims 2, 4, 6-11 are rendered moot in view of the arguments made to independent Claims 1 and 3. Applicants believe that all pending claims 1-4 and 6-11 are now allowable over the cited art and are also in allowable form and respectfully request a Notice of Allowance for this application from the Examiner.

Applicants hereby petition the Examiner for a one-month extension of time with which to respond to the referenced Office Action and has authorized the commissioner via EFS to charge our credit card to pay for the RCE fee and the extension of time fees. The commissioner is authorized to charge any additional fees that may be due to our Deposit Account No. 50-2766 (Order No. **DEM1P003**). Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at telephone number 925-570-8198.

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